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# CITRUS

## OCTOBER FORECAST MATURITY TEST RESULTS AND FRUIT SIZE



October 12, 2004

### ALL ORANGES 176.0 MILLION BOXES

The 2004-05 Florida orange forecast, released today by the USDA Agricultural Statistics Board, is a hurricane reduced 176.0 million boxes. This forecast is for conditions as of October 1, and takes into account losses of fruit from the four hurricanes that passed through citrus producing areas of the State in August and September. The forecast is 66 million boxes, or 27 percent, less than last season's near record 242.0 million boxes. The total is divided into the early-midseason-Navel forecast of 92.0 million boxes and the Valencia portion of 84.0 million.

### FORECAST PROCEDURES

All forecasts are based on tree inventory, fruit counts, and fruit measurements made by the Florida Agricultural Statistics Service. Analysis of these factors projects the quantity of fruit to be utilized during the season. Page 6 of this release details these procedures.

### POST-HURRICANE ADAPTATIONS

This season the annual Limb Count survey was modified to account for the effects of recent hurricanes – Charley on August 13<sup>th</sup> and Frances on September 5<sup>th</sup>. In order to better assess the damage, crews refrained from surveying the areas affected for a period of time and concentrated on other counties. When work resumed in the affected areas,

### CITRUS PRODUCTION, OCTOBER 1, 2004

#### FORECASTS BY VARIETIES AND STATES, WITH COMPARISONS

Crop and State	Production			Forecast
	2001-02	2002-03	2003-04	2004-05
--- 1,000 boxes ---				
<b>EARLY, MIDSEASON, AND NAVAL ORANGES:</b>				
<b>FLORIDA</b>	<b>128,000</b>	<b>112,000</b>	<b>126,000</b>	<b>92,000</b>
California	32,000	42,000	38,000	46,000
Texas	1,530	1,350	1,420	1,650
Arizona	270	200	300	270
Total Above Varieties	161,800	155,550	165,720	139,920
<b>VALENCIAS:</b>				
<b>FLORIDA</b>	<b>102,000</b>	<b>91,000</b>	<b>116,000</b>	<b>84,000</b>
California	19,500	20,000	14,000	16,000
Texas	210	220	230	250
Arizona	250	270	170	170
Total Valencias	121,960	111,490	130,400	100,420
<b>ALL ORANGES:</b>				
<b>FLORIDA</b>	<b>230,000</b>	<b>203,000</b>	<b>242,000</b>	<b>176,000</b>
California	51,500	62,000	52,000	62,000
Texas	1,740	1,570	1,650	1,900
Arizona	520	470	470	440
Total All Oranges	283,760	267,040	296,120	240,340

### FORECAST DATES 2004-05 SEASON

November 12, 2004

December 10, 2004

samples that were not counted prior to the storms were completed. To help adjust for the storm damages, approximately one-third of the limbs in previously sampled groves were recounted. This work was completed by September 25<sup>th</sup>, one day before Hurricane Jeanne. To account for additional fruit loss from Jeanne, field personnel assessed dropped fruit while collecting samples on the monthly Maturity Survey. Additional loss factors by location, type, and age of tree were then applied to fruit numbers from the Limb Count surveys.

In addition, the monthly size and drop survey was modified to account for storm losses in the areas affected. This survey will monitor fruit droppage and size in the coming months.

Bearing tree numbers used in the forecasts include trees planted in 2001 and earlier. Attrition rates of the last several seasons were considered when determining the rate to be applied to the 2004 Commercial Citrus Inventory that was completed before the hurricanes. Additional losses were estimated to account for trees lost from the hurricanes.

In seasons not affected by unusual weather events, the objective count procedures are designed to be, and have been successful at projecting final utilization within five percent in most seasons. In the past ten seasons, final utilization differed from the October forecast by an average of 3.9 percent. Accuracy of this season's forecasts will be affected by survey modifications and future weather conditions that may alter fruit size and drop assumptions.

### FCOJ YIELD 1.56 GALLONS PER BOX

The all orange FCOJ yield projection is 1.56 gallons per box of 42 degrees Brix concentrate. Last season's final yield as reported by the Florida Citrus Processors Association was 1.5565 gallons per box. Final yield over the past five seasons has been very consistent, varying from a low of 1.54 to a high of 1.58. The record high yield of 1.63 gallons occurred in the 1998-99 season. A separate projection for fruit going into the early-midseason and late categories will be made in the January release. Projections of yield assume the processing relationships of recent seasons. See pages 3 and 4 for further details.

**EARLY-MIDSEASON-NAVEL 92.0 MILLION BOXES**

The early-midseason-Navel forecast is 92.0 million boxes, 27 percent less than harvested last season, and is the smallest crop since the 83.4 million boxes produced in the 1991-92 season.

Excluding Navels, 32.0 million bearing trees were used in the expansions, down 1.3 percent from last season. Bearing tree numbers have been declining since the 1998-99 season.

The average fruit per tree from the Limb Count survey (weighted by the 25 cell age/area matrix) is 30 percent less than last season and the lowest since the 1982-83 season. The Central area had the highest fruit per tree average, followed closely by the Southern area. Pieces of fruit per tree in the Indian River District, affected most severely by the recent hurricanes, have approximately one-third of the state average. The early portion, mostly Hamlins, represents 86 percent of the early-mid fruit population.

Fruit size in September ties as the second lowest in a ten season series, however the growth rate is projected to be slightly above average due to the abundant rainfall, and light fruit set. Average size is projected to be the third lowest in ten years at harvest. At this size, it will take 21 more fruit than last season to make a 90 pound equivalent box.

Current drop is slightly below average; however, drop is expected to be above average by harvest. Future weather conditions could alter the projection for both drop and size.

**NAVEL ORANGES ONLY 3.0 MILLION BOXES**

The Navel forecast at 3.0 million boxes is 30 percent less than last season's 4.3 million boxes harvested. This forecast includes an allocation of 1.0 million boxes for non-certified and gift fruit. The current forecast is the lowest since the 2.6 million boxes utilized in the 1987-88 season.

The number of bearing trees has been declining since the 1996-97 season and now are estimated at 1.9 million, eight percent less than last season. Average fruit per tree is 34 percent less than last season and the lowest on record since forecasting Navels separately beginning in the 1986-87 season. Fruit sizes are smaller than average and with the current growth rates fruit is expected to remain slightly below average.

Fruit drop is very low at this time, but is expected to be slightly above average by the end of the season. A good portion of this crop this year will be used by fund raising groups.

**VALENCIA ORANGES 84.0 MILLION BOXES**

The Valencia forecast of 84.0 million boxes is the lowest since the 74.0 million boxes harvested in the 1998-99 season. This forecast is 28 percent less than the record 116.0 million boxes harvested last season.

Estimated bearing tree numbers at 41.2 million are up compared to 40.9 million last season. A high proportion of the trees planted in the last few years have been Valencias, which are now coming into production.

Average fruit per tree decreased 22 percent from last season's level and is the second lowest average in a 10 year series, with the 2002-03 season being slightly lower. The fruit population distribution shows 70 percent of the crop in the Central and Southern areas, due to the heavy hurricane damage in the Western and Indian River areas. The Southern area, predominantly the Gulf Marketing District, has 38 percent as compared to 32 percent last season.

Despite low average fruit per tree, the current below average growth rate has resulted in projected fruit sizes to be slightly below the ten year average. Early season above average rainfall may continue to affect growth rates and fruit sizes. Current drop rates are slightly below average, but are

**COMPONENTS USED IN THE OCTOBER FORECAST**

Type	Bearing trees	Fruit per tree	Percent droppage	Fruit per box
	(1,000)			
Early-Mid	31,999	863	10	251
Navel	1,862	249	14	134
Valencia	41,208	529	15	207

expected to be above average at harvest. Due to the longer time to maturity of Valencias than other orange varieties and weather conditions during the next several months, these fruit size and droppage assumptions could change and alter the expected crop size.

**TEMPLES 800,000 BOXES**

The Temple forecast of 800,000 boxes is the lowest amount since the series began in 1954-55. If realized, this crop will be 43 percent less than last season's utilization of 1.4 million boxes, and 87 percent below the record 6.0 million boxes.

Bearing tree numbers continue to decline, down 12 percent from last season. Also, because of the hurricanes, average fruit per tree is down 43 percent from last season.

As with other varieties, trees were uprooted and split from the hurricanes that affected the east coast and interior growing areas. Droppage is expected to be above average although weather effects of the next several months may alter this projection. Average fruit sizes are expected to be larger than average, but also may be altered by future weather conditions.

**TANGELOS 1.4 MILLION BOXES**

The tangelo forecast of 1.4 million boxes is 40 percent more than last season's greatly reduced 1.0 million boxes. Although not a record low, last season's production is the lowest in a downward trend dating back to 1979-80. Last season, the average fruit per tree was very low. This season, in spite of the hurricanes, average fruit per tree is 81 percent more than last.

Bearing tree numbers are down 21 percent from last season. Fruit sizes are smaller than average at this time and are expected to be smaller at harvest. Droppage at harvest is expected to be above average, but may be altered because of weather conditions in the next several months.

<b>EXPECTED GIFT FRUIT SHIPMENTS UNDER THE 6-R PROGRAM, AND NON-CERTIFIED USAGE, 2004-05 SEASON</b>	
Type	1,000 boxes
Early and Midseason Oranges	2,000
Valencia Oranges	1,000
White Grapefruit	200
Colored Grapefruit	500
Temples	50
Tangelos	200
Tangerines	300

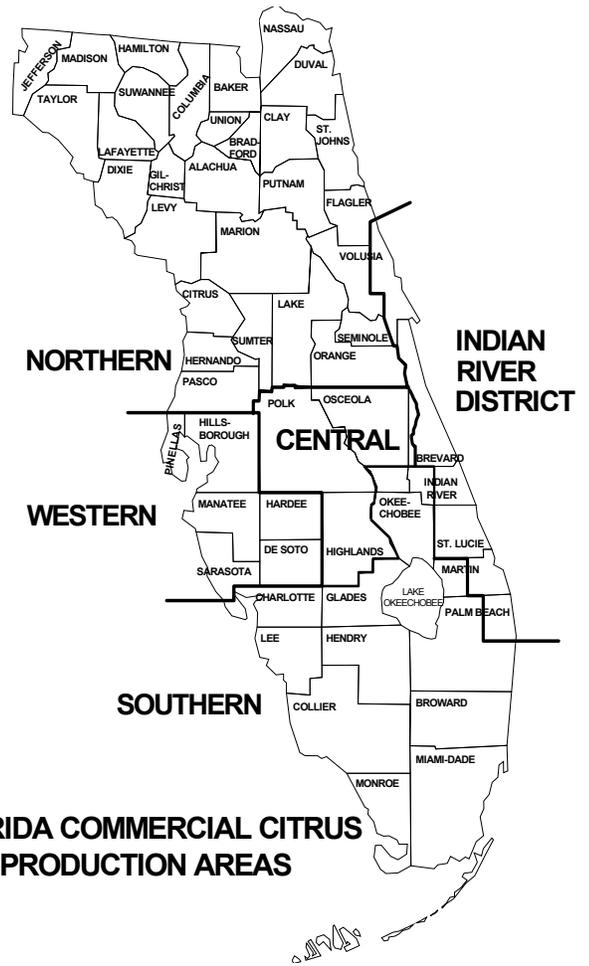
**FLORIDA CITRUS:** Distribution of estimated fruit population in September by areas and age groups <sup>1/</sup>

Areas and age groups	Oranges			
	Early - Midseason		Valencia	
	2003-04	2004-05	2003-04	2004-05
-- Percent --				
Indian River District	6	3	10	6
Northern	8	6	2	3
Central	30	27	32	32
Western	35	28	24	21
Southern	21	36	32	38
3 - 5 years	2	4	6	6
6 - 8 years	3	4	5	7
9 - 13 years	23	20	30	26
14 - 23 years	45	54	34	45
24 yrs & over	27	18	25	16

Areas and age groups	Seedless Grapefruit			
	White		Colored	
	2003-04	2004-05	2003-04	2004-05
-- Percent --				
Indian River District	72	34	69	33
Northern	<sup>2/</sup>	1	2	5
Central	14	25	12	11
Western	2	3	4	3
Southern	12	37	13	48
3 - 5 years	1	2	1	2
6 - 8 years	6	4	3	4
9 - 13 years	22	20	31	39
14 - 23 years	15	38	33	41
24 yrs & over	56	36	32	14

<sup>1/</sup> Distribution of fruit population in September as determined by multiplying average fruit per tree from the Limb Count Survey by bearing age trees.

<sup>2/</sup> Less than one percent.



**FLORIDA COMMERCIAL CITRUS PRODUCTION AREAS**

**UNADJUSTED MATURITY TESTS:** Average of regular bloom fruit from sample groves, 2003-04 and 2004-05 seasons

Fruit type (No. groves) test date	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
	Percent		Percent				Pounds		Pounds	
<i>Juice and solids per box are unadjusted and not comparable to plant test results.</i>										
<b>ORANGES:</b>										
Early (120-120)										
Sep 1	1.21	1.62	9.34	9.31	7.85	5.85	42.64	42.42	3.98	3.95
Oct 1	0.83	1.08	9.68	9.27	11.82	8.73	49.07	48.40	4.75	4.49
Mid (55-53)										
Sep 1	1.43	1.80	9.35	9.02	6.63	5.11	44.12	42.08	4.13	3.79
Oct 1	1.06	1.26	9.73	9.01	9.39	7.26	49.26	49.93	4.79	4.50
Late (150-144)										
Sep 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct 1	2.01	2.43	8.92	8.64	4.47	3.59	46.28	46.50	4.13	4.02
<b>GRAPEFRUIT:</b>										
White Seedless (50-45)										
Sep 1	1.55	1.70	9.53	9.55	6.18	5.62	34.78	32.97	3.31	3.15
Oct 1	1.39	1.42	9.78	9.24	7.05	6.54	38.74	38.87	3.79	3.59
Colored Seedless (49-48)										
Sep 1	1.49	1.66	9.81	9.74	6.58	5.87	34.79	33.96	3.42	3.31
Oct 1	1.33	1.37	10.12	9.45	7.63	6.94	40.26	40.29	4.07	3.81

NOTICE: All samples were run through an FMC 091 machine using mechanical pressure only. This machine utilizes a .040 short strainer and standard 5/8-inch orifice tube. The beam settings are also identical to past tests and no restrictors are used.

**UNADJUSTED MATURITY TESTS: Averages of regular bloom fruit from sample groves, by types, as of October 1, 1996 through 2004**

**MATURITY**

Fruit type	Groves sampled	Acid	Solids (Brix)	Ratio	Unfinished juice per box	Solids per box
	<i>Number</i>	<i>Percent</i>	<i>Percent</i>		<i>Pounds</i>	<i>Pounds</i>
<b>ORANGES:</b>						
EARLY						
1996	120	1.14	9.85	8.84	48.14	4.74
1997	120	0.99	9.80	10.17	47.27	4.63
1998	120	1.14	9.38	8.34	47.88	4.49
1999	120	1.20	9.36	7.94	46.51	4.35
2000	120	1.10	9.85	9.13	48.63	4.78
2001	120	0.96	9.81	10.40	48.92	4.80
2002	120	0.89	9.82	11.41	51.79	5.08
2003	120	0.83	9.68	11.82	49.07	4.75
2004	120	1.08	9.27	8.73	48.40	4.49
MIDSEASON						
1996	55	1.40	9.76	7.07	48.95	4.78
1997	54	1.14	9.43	8.47	50.05	4.72
1998	55	1.30	9.14	7.19	48.25	4.41
1999	55	1.41	9.10	6.57	46.89	4.27
2000	55	1.22	9.47	7.94	49.78	4.71
2001	55	1.17	9.56	8.39	49.75	4.76
2002	55	1.01	9.58	9.68	52.84	5.06
2003	55	1.06	9.73	9.39	49.26	4.79
2004	53	1.26	9.01	7.26	49.93	4.50
LATE						
1996	150	2.40	8.93	3.76	46.08	4.11
1997	150	2.10	8.84	4.30	47.87	4.23
1998	150	2.44	8.65	3.60	45.68	3.95
1999	150	2.51	8.55	3.45	43.36	3.71
2000	150	2.45	8.80	3.65	46.50	4.09
2001	150	2.19	8.87	4.11	47.72	4.23
2002	150	2.04	8.70	4.34	48.96	4.26
2003	150	2.01	8.92	4.47	46.28	4.13
2004	144	2.43	8.64	3.59	46.50	4.02

Results of the second maturity tests of the 2004-05 season for all but the late oranges, which were tested for the first time, are to the left. Samples tested are from groves on routes which cover all five major citrus producing areas.

Sample size for all types have remained constant for the past several seasons. The grapefruit sample size was 100 at the start of this season, which included 50 samples each for the white and colored seedless types. After the hurricanes, only 45 white samples had sufficient fruit remaining to test, however 48 colored grapefruit samples remained for use. All of the 120 early oranges, 53 of the 55 midseason, and 144 of the 150 Valencias were available for testing.

Samples were collected September 28-29 and tested at the Orlando test laboratory of the Florida Agricultural Statistics Service. Only regular bloom fruit is collected and tested.

Rainfall through the summer has been excessive in all areas. Lower interior and coastal areas have received more than the upper interior with some recording stations showing two or three times the average for the year.

In comparison to previous seasons, acid levels are the highest since 2000-01 for the early and late varieties and 1999-00 for the midseason fruit. Brix levels are lower than in recent seasons. Grapefruit acid levels are higher than last season at this time.

The ratio of solids to acid is low reflecting the high acid levels. Juice levels for early oranges are slightly lower than last season but higher for midseasons and Valencias. Generally, maturity levels are two or three weeks behind last season.

Some fresh fruit packers opened in late September. Varieties being shipped include early oranges, early tangerines, and grapefruit.

**Maturity test averages by areas, October 1, 2004**

Fruit type	Groves sampled	Acid	Solids (Brix)	Ratio	Unfinished juice per box	Solids per box
	<i>Number</i>	<i>Percent</i>	<i>Percent</i>		<i>Pounds</i>	<i>Pounds</i>
<b>ORANGES:</b>						
EARLY						
Indian River Dist.	9	1.21	9.49	7.95	46.68	4.42
Other Areas	111	1.07	9.26	8.79	48.54	4.49
MIDSEASON						
Indian River Dist.	10	1.29	8.68	6.81	49.60	4.30
Other Areas	43	1.25	9.08	7.36	50.01	4.54
LATE						
Indian River Dist.	23	2.37	8.54	3.67	46.71	4.00
Other Areas	121	2.45	8.65	3.57	46.47	4.02
<b>GRAPEFRUIT:</b>						
WHITE SEEDLESS						
Indian River Dist.	35	1.43	9.29	6.51	38.96	3.62
Other Areas	10	1.37	9.07	6.63	38.56	3.50
COLORED SEEDLESS						
Indian River Dist.	38	1.38	9.44	6.89	40.38	3.82
Other Areas	10	1.34	9.46	7.14	39.91	3.77

**ALL GRAPEFRUIT 15.0 MILLION BOXES**

The forecast of grapefruit for certified utilization is 15.0 million boxes. This forecast is greatly reduced from previous seasons because of the effects of four hurricanes that hit the State's growing areas in August and September. Only the Southern area was not directly affected with Hendry, Collier, and Lee counties receiving primarily heavy rainfall amounts on several occasions. If realized, this forecast will be 63 percent less than last season's production.

**GRAPEFRUIT: 2003-04 production and a proration of the 2004-05 forecasts based on fruit populations, by production areas <sup>1/</sup>**

Production Area	2003-04		2004-05	
	White	Colored	White	Colored
	--- 1,000 boxes ---			
Indian River	11,200	16,800	1,400	3,600
Southern	1,400	4,500	1,500	5,300
Other	3,300	3,700	1,100	2,100

<sup>1/</sup> The possible differences between growing areas, concerning average fruit size, loss from droppage, and harvest patterns, can alter the prorated estimates.

The Indian River growing area was greatly affected by Hurricane Frances on September 5<sup>th</sup> and Hurricane Jeanne on September 29<sup>th</sup>. Both storms brought high winds and heavy rain which blew fruit off the trees, broke limbs, and split trees. Standing water in groves has caused softening of fruit and continued fruit droppage.

**CITRUS PRODUCTION: October 1, 2004 forecasts by varieties and states, with comparisons**

Crop and State	Production			Forecast
	2001-02	2002-03	2003-04	2004-05
	--- 1,000 boxes ---			
GRAPEFRUIT:				
<b>FLORIDA-All</b>	<b>46,700</b>	<b>38,700</b>	<b>40,900</b>	<b>15,000</b>
<b>White</b>	<b>18,900</b>	<b>16,200</b>	<b>15,900</b>	<b>4,000</b>
<b>Colored</b>	<b>27,800</b>	<b>22,500</b>	<b>25,000</b>	<b>11,000</b>
Texas	5,900	5,650	5,700	5,900
Arizona	160	130	140	200
California	5,900	5,600	5,400	5,200
<b>Total Grapefruit</b>	<b>58,660</b>	<b>50,080</b>	<b>52,140</b>	<b>26,300</b>
LEMONS:				
California	18,300	24,000	18,000	19,500
Arizona	2,800	3,000	3,000	2,400
<b>Total Lemons</b>	<b>21,100</b>	<b>27,000</b>	<b>21,000</b>	<b>21,900</b>
Limes: <b>Florida</b>	<b>150</b>	<sup>1/</sup>	<sup>1/</sup>	<sup>1/</sup>
Temples: <b>Florida</b>	<b>1,550</b>	<b>1,300</b>	<b>1,400</b>	<b>800</b>
Tangelos: <b>Florida</b>	<b>2,150</b>	<b>2,350</b>	<b>1,000</b>	<b>1,400</b>
K-Early: <b>Florida</b>	<b>30</b>	<sup>1/</sup>	<sup>1/</sup>	<sup>1/</sup>
TANGERINES:				
<b>FLORIDA-All</b>	<b>6,600</b>	<b>5,500</b>	<b>6,500</b>	<b>4,700</b>
<b>Early <sup>2/</sup></b>	<b>4,350</b>	<b>3,000</b>	<b>3,600</b>	<b>2,500</b>
<b>Honey</b>	<b>2,250</b>	<b>2,500</b>	<b>2,900</b>	<b>2,200</b>
California <sup>3/</sup>	2,200	2,800	2,700	2,900
Arizona <sup>3/</sup>	620	430	690	500
<b>Total Tangerines</b>	<b>9,420</b>	<b>8,730</b>	<b>9,890</b>	<b>8,100</b>

<sup>1/</sup> No forecast.

<sup>2/</sup> 2001-02 -- Robinson, Fallglo, Sunburst, and Dancy varieties, Fallglo and Sunburst only beginning in 2002-03.

<sup>3/</sup> Includes tangelos.

**COMPONENTS USED IN THE OCTOBER FORECAST**

Type	Bearing trees	Fruit per tree	Percent droppage	Fruit per box
	(1,000)			
White Grapefruit <sup>1/</sup>	2,861	109	11	79
Colored Grapefruit	5,366	210	12	88

<sup>1/</sup> Seedless variety only.

This season's bearing tree numbers include trees planted in 2001 and earlier. Attrition rates, calculated using the 2002 and 2004 editions of the Commercial Citrus Inventory, were used as a guide to determine the rate to apply to last season's tree numbers. In addition, further reductions were made for losses from the hurricanes.

**White** grapefruit bearing tree numbers continue to decline although the number planted in 2001 was higher than in the previous four years. Estimated white seedless tree numbers used in the forecast model declined nine percent from last season to 2.861 million. Average fruit per tree is 109, down 78 percent from last season, due to the hurricanes. Many trees have very small amounts of fruit remaining and harvest of these blocks is in question. Fruit sizes at harvest are estimated near the same as last season, which is above average, but final sizes may be further affected by continuing rainfall and standing water. Droppage is estimated above average for the same reasons.

**Colored** grapefruit bearing tree numbers are estimated at 5.366 million, six percent less than last season. Although attrition rates of older trees continue to be high, the number of trees planted in 2001 was higher than in the previous seven years. Average fruit per tree is greatly reduced because of the hurricanes and, at 210 pieces per tree, is 58 percent less than last season. Colored grapefruit was less affected by the storms because of the many younger trees in this category. Average fruit sizes at harvest are estimated larger than last season, but weather conditions later in the season may affect the outcome of this projection. Droppage is estimated above average at 12 percent.

**ALL TANGERINES 4.7 MILLION BOXES**

The forecast of all tangerines at 4.7 million boxes is 28 percent less than produced last season (due to the hurricanes) and is the lowest production since the 1995-96 season. The forecast is comprised of the early varieties (Fallglo and Sunburst) at 2.5 million boxes and the Honey variety at 2.2 million.

**Fallglo** tangerines, the earliest maturing variety, comprises about 25 percent of the early category forecast. Bearing trees at 317,000 are down 10 percent from last season. Some trees were reported badly broken by the hurricanes. Average fruit per tree is reduced because of the storms, but fruit sizes are above average. Droppage is projected near the average of 14 percent. Limited harvest has started.

**Sunburst** tangerines comprise the majority of the early tangerine production. Bearing tree numbers are estimated at 1.277 million, down seven percent from last season. Trees were reported broken because of the storms. Fruit per tree at 503, a relatively high amount, was reduced by the storms. Fruit sizes are projected to be larger than average at harvest. Droppage is projected near average.

The **Honey** tangerine forecast of 2.2 million boxes is the smallest crop since the 2.05 million boxes produced in the 2000-01 season. A large portion of these trees are located in the Southern area and were not affected by the storms. Fruit sizes are projected to be slightly larger than average with droppage rates near normal as well.

**FORECAST PROCEDURES FOR THE 2004-05 SEASON**

All citrus forecasts except seedy grapefruit are based on actual fruit counts and measurements. These objective count methods utilize: (1) the bearing age tree population provided from the latest aerial photography with field verifications, (2) the average fruit per tree obtained from the fruit count survey using randomly selected trees and limbs, and (3) the fruit measurement and fruit drop count surveys to determine fruit sizes and loss from fruit droppage.

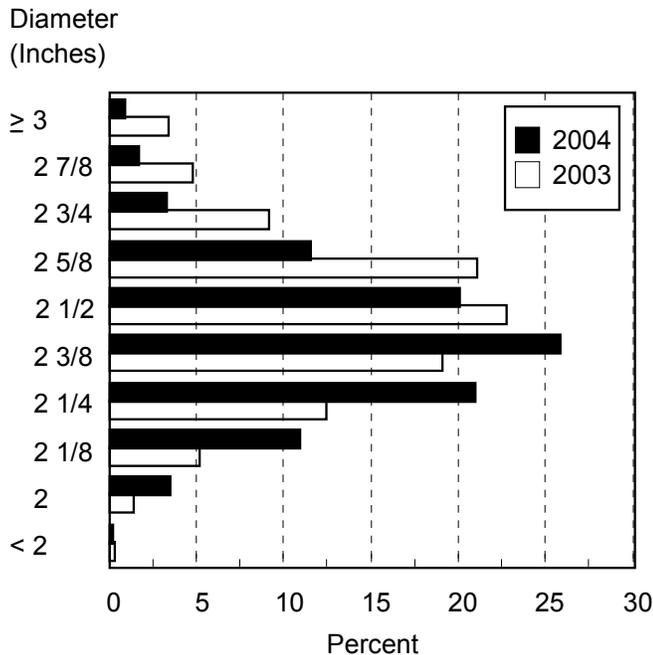
The latest Commercial Citrus Inventory is the base used to determine forecast tree numbers for this season. All trees planted in 2001 and earlier are included. An attrition factor by age and area was applied to these base numbers to account for tree losses since the inventory period. In addition an adjustment factor was applied to areas affected by the hurricanes to account for trees blown over, uprooted, and severely damaged.

The same unbiased fruit count procedures were used as in all of the past 47 seasons. Following the passage of Hurricane Charley on August 13<sup>th</sup> and Hurricane Frances on September 5<sup>th</sup>, recounts were conducted on a sub-sample of trees in the affected areas. Following the passage of Hurricane Jeanne on September 26<sup>th</sup>, subjective evaluations were conducted in each county affected to account for additional green fruit on the ground. An adjustment factor was then applied by fruit type, county, and age group of trees to reduce the average fruit per tree estimate.

Fruit size surveys were conducted in August and September. The fruit loss surveys (drop count) were begun in August and modified following the first two hurricanes. These surveys, along with historical records, were used to project the fruit size at harvest and the fruit population that is expected to remain on trees until harvest.

The chart below describes the relationship of the September 2004 early and midseason orange (excluding Navels) fruit size measurements with those taken in September 2003. The diameter measurements shown are the minimum values of each eighth inch range, except for the smallest values.

**Fruit Size:** Early and midseason oranges (excluding Navels) size frequency by diameter from September measurements.



Size frequency distributions developed from the September size survey are shown in the following table. The distributions are by percent of fruit falling within the size range of each 4/5-bushel container. These frequency distributions relate to fruit from regular bloom and exclude summer bloom in all years.

**FLORIDA CITRUS: Size frequency distributions from September measurements**

Type of fruit and size in 4/5-bushel containers	2002	2003	2004
--- Percent ---			
<b>EARLY AND MIDSEASON ORANGES: (excluding Navels)</b>			
64 and larger	1.1	0.6	0.2
80	6.8	4.8	1.3
100	26.4	20.0	8.2
125	37.1	36.0	27.9
163 and smaller	28.6	38.6	62.4
<b>NAVEL ORANGES:</b>			
64 and larger	31.4	44.3	19.7
80	37.9	35.3	34.6
100	22.7	15.2	31.5
125	6.8	4.3	11.4
163 and smaller	1.2	0.9	2.8
<b>VALENCIA ORANGES:</b>			
64 and larger	1.2	0.4	0.0
80	8.5	5.3	0.6
100	31.5	24.5	7.9
125	35.4	37.2	28.9
163 and smaller	23.4	32.6	62.6
<b>WHITE SEEDLESS GRAPEFRUIT:</b>			
32 and larger	10.0	7.9	3.1
36	15.0	9.8	8.1
40	22.6	16.8	14.0
48	20.4	21.7	19.1
56	12.8	13.2	16.9
63 and smaller	19.2	30.6	38.8
<b>COLORED SEEDLESS GRAPEFRUIT:</b>			
32 and larger	8.2	4.0	0.9
36	12.5	7.6	5.6
40	20.2	11.6	11.2
48	20.3	20.8	18.5
56	12.9	18.4	17.2
63 and smaller	25.9	37.6	46.6
<b>FALLGLO TANGERINES:</b>			
80 and larger	41.1	24.5	19.0
100	25.6	41.4	54.0
120	17.2	12.7	22.0
176	7.2	6.8	3.0
210 and smaller	8.9	14.6	2.0
<b>SUNBURST TANGERINES:</b>			
100 and larger	15.0	4.5	2.9
120	25.3	12.2	9.8
176	19.7	15.5	9.8
210 and smaller	40.0	67.8	77.5
<b>TANGELOS:</b>			
80 and larger	8.5	9.2	0.6
100	23.8	25.0	4.0
120	31.9	25.0	17.5
156 and smaller	35.8	40.8	77.9